DRUZ', B.I., insh.; MAGULA, V.F., kand.tekhn.nauk

Designing freely lying flexible containers. Sudostroenie 27 no.7:10-12 Jl '61. (MIRA 14:11)
(Containers, Floating)

DRUZ, B., starshiy prepodavatel'; MAGULA, V., kand.tekhn.nauk, dotsent; YUDOVICH, A.

Use of flexible containers on ship decks. Mor. flot 22 no.7:34-35 Jl '62. (MIRA 15:7)

1. Vladivostokskoye vyssheye inzhenernoye morskoye uchilishche (for Druz', Magula). 2. Kapitan shkhuny "Zarya" (for Yudovich) (Ships--Water supply)

DRUZ', B. I., inzh.; MAGULA, V. E., kand. tekhn. nauk

Formulas for calculating the strength of free floating flexible container shells. Sudostroenie 28 no.10:10-11 O '62. (MIRA 16:1)

(Containers, Floating)

MAGULA, Valentin Emmanuilovich, kand. tekhn. nauk; DRUZ', Boris Ivanovich, kand. tekhn. nauk; KULAGIN, Vitaliy Dmitriyevich, kand. tekhn. nauk; Prinimal uchastiye LUKIN, G.Ya., kand. tekhn. nauk; GORYANSKIY, Yu.V., dots., retsenzent; GULIYEV, Yu.M., dots., retsenzent; KOKHANOVSKIY, K.V., dots., retsenzent; LEBEDEV, A.M., dots., retsenzent; SPITKOVSKIY, M.I., dots., retsenzent; VASIL'YEV, I.V., dots., retsenzent; SERKO, G.S., red.; TIKHONOVA, Ye.A., tekhn.red.

[Theory and the structural arrangement of ships] Teoriia i ustroistvo sudov. Moskva, Izd-vo "Morskoi transport," 1963. 494 p.
(MIRA 17:3)

AFONIN, Z.M., inzh.; BEKENSKIY, B.V., inzh.; BELAN, F.N., inzh.; GOKYANSKIY, Yu.V., kand. tekhn. nauk; GRIGOR'YEV, Ya.N., inzh.; KOVALEVSKIY, G.V., kand. tekhn. naul; MAGULA, V.E., kand. tekhn. nauk, retsenzent; DRUZI, B.I., kand. tekhn. nauk, retsenzent; KULAGIN, V.D., kand. tekhn. nauk, retsenzent; DOROGOSTAYSKIY, D.V., doktor tekhn. nauk, red.

[Theory and construction of ships] Teoriia i ustroistvo sudov. Moskva, Transport, 1965. 371 p. (MIRA 18:9)

ACC NR: AM6021383 Monograph UR/

Magula, Valentin Emmanuilovich; Druz', Boris Ivanovich; Kulagin, Vitaliy Dmitriyevich; Miloslavskaya, Yekaterina Petrovna; Novoselov, Mikhail Vasil'yevich

Flexible shipboard containers (Sudovyye myagkiye yemkosti) Leningrad, Izd-vo "Sudostroyeniye," 1966. 287 p. illus., biblio., 2000 copies printed.

TOPIC TAGS: containers, packaging, flexible containers, disposable shipboard containers

PURPOSE AND COVERAGE: This book is intended for engineering, technical, and scientific personnel of the shipbuilding industry, and of the marine, river and fishing fleets. It contains general information on the latest types of shipboard packages, disposable elastic containers, including their design, materials, and special uses. The authors acknowledge the following contributors: I. I. Korobkin, A.S. Babayev, Yu. F. Andrianov, S. D. Knoring, A. R. Lekhtsiyer, Ye. P. Pokromkin, V. V. Moroz, L. M. Mal'tsev, F. R. Nitochkin, and P. V. Marchenko.

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UDC 629.123. 562

ACC NR: AM6021383

TABLE OF CONTENTS [abridged]:

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ACC NR: AM6021383

Bibliography -- 279

SUB CODE: 13, 14/ SUBM DATE 29Jan66/ ORIG REF: 125/ OTH REF: 059/

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Card 3/3

DRUZ', B.R.

The "Zhelud'"-system equipment for a dispatcher, loudspeaker and telephone communication. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 18 no.3:32-33 Mr '65. (MIRA 18:5)

AUTHOR: Druz', G.I., Engineer

TITLE: Determining the Position and Direction of an Antenna on the Terrain (Opredeleniye polozheniya i napravleniya antenny na mestnosti)

SOV/111-58-2-9/27

PERIODICAL: Vestnik svyazi, 1958, Nr 2, pp 12 - 14 (USSR)

ABSTRACT: A method for determining the position and direction of an antenna when wetting up a radio station is described. This method involves the application of a theodolite, a map, and principles of trigonometry. The author cites an example for the application of the formulas. There are two diagrams.

Card 1/1

DRUZ', I.

Lesson taught by a fire. Pozh.delo 8 no.6:20-21 Je '62. (MIRA 15:6)
(Lumberyards--Fires and fire prevention)

DRUZ', Ivan Andreyevich; AMMOSOV, F.A., nauchn. red.

[Fire-prevention instructions and the required minimum of technical knowledge for workers and employees] Protivopozharnyi instruktazh i tekhminimum s rabochimi i sluzhashchimi. Moskva, Stroiizdat, 1964. 69 p.
(MIRA 17:12)

BREUSOV, O.N.; KOROTKEVICH, M.N.; ODINTSOVA, V.G.; TSIBULEVSKAYA, K.A.; DRUZ', N. A.

Preparation of germanium sulfides of reactive grade. Prom.khim.reak. i osobo chist.veshch. no.2:49-53 '63. (MIRA 17:2)

ACC NR: AP6032947 SOURCE CODE: UR/0363/66/002/010/1803/1810

AUTHOR: Kutolin, S. A.; Vulikh, A. I.; Druz', N. A.; Shammasova, A. Ye.

ORG: none

TITLE: Dependence of the structure and properties of the A_2BO_3 and ABO_3 compounds on the composition of the gaseous atmosphere in thermal synthesis

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 10, 1966, 1803-1810

TOPIC TAGS: ferroelectric material, antiferroelectric material, dielectric constant, physical chemistry property, refractive index

ABSTRACT:

In a recently published article, the authors [association unknown] analyzed the data from Western and Soviet literature, including their own experimental data which were published in 1964-66, on the thermal synthesis, structure, and properties of A_2BO_3 and ABO_3 compounds, where A is an alkali metal and B is Ti, Zr, Mn, Nb, or Ta.

In previous publications, the authors established the effect of the gaseous medium in which the compounds were synthesized on their structure and particle size. Now, they have made a detailed analysis of the earlier data to correlate the conditions of synthesis,

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UDC: 666.3:541.6

primarily the gaseous medium, with the physicochemical properties of the compounds. In the authors' opinion, this analysis is of practical importance for the synthesis and application of these compounds. The properties studied were: density, index of refraction, dielectric constant, intensity of IR absorption bands, and catalytic activity. The experimental data were obtained with samples sintered at a relatively low temperature from a solid mixture of an alkali carbonate and an acidic oxide, in vacuum or in a nitrogen stream.

The nature of the gaseous medium was shown to affect only the structure of alkali metatitanates and manganites (A_2BO_3), and not their physicochemical properties, such as density, index of refraction, or dielectric constant. Density was the only property of the manganites which was actually measured; the index of refraction and dielectric constant of the manganites exceeded the measurable values. An exception was the crystal symmetry of K_2TiO_3 and $RbTiO_3$ which apparently remained unaffected by the gaseous medium in which their synthesis was accomplished. However, the existence in these two compounds of second order phase transitions, undetected by x-rays, may not be excluded. In all alkali metatitanates the intensity of the IR absorption bands due to deformation vibrations of

the $[TiO_6]$ octahedra was found to be independent of the method of synthesis. Their catalytic activity was affected by the gaseous medium, as shown, for example, by the comparative data on specific surface, preexponential factor, and activation energy for a maximum decomposition of hydrogen peroxide on a Li_2TiO_3 catalyst prepared in the air or in vacuum.

In the group of A_2BO_3 and ABO_3 compounds, where B is Zr, Nb, or Ta, i.e., alkali metazirconates, metaniobates, and metatantalates, only $NaTaO_3$ behaved like the alkali metatinates and manganites versus the gaseous atmosphere in the synthesis. The gaseous atmosphere changes the crystal structure, i.e., symmetry type and lattice constants of $NaTaO_3$, but does not affect its picnometric density or intensity of deformation vibrational bands in their IR transmission spectra. Other compounds of this group -- Li_2ZrO_3, $NaNbO_3$, $KNbO_3$, $CsNbO_3$, and $CsTaO_3$ -- change their crystal structure, i.e., symmetry type and/or lattice constant, in different gaseous media simultaneously with certain physicochemical properties, e.g., picnometric density, dielectric constant, intensity of deformation vibrational bands in the IR absorption spectra, and catalytic activity versus H_2O_2 decomposition.

The crystal structure of $LiNbO_3$, $LiTaO_3$, and $KTaO_3$, was not affected by the difference in gaseous atmosphere in the synthesis, but picnometric density, index of refraction, and intensity of deformation vibrational bands of the IR spectra were substantially changed.

These diverse and strong effects of the gaseous medium on the structure and properties of A_2BO_3 and ABO_3 compounds were explained as the result of deformability of their structure, specifically of the tendency toward distortion of the $[TiO_6]$, $[NbO_6]$, and $[TaO_6]$ octahedra. This deformability was correlated with a significant ionic polarizability of the alkali metatitanates, metaniobates, and metatantalates. This correlation which was experimentally established for the above-indicated compounds (presumably) may be extended to other compounds with significant ionic polarizability and may form the base for predicting the possibility of a beneficial effect of a given gaseous medium on the completeness of synthesis of a given compound. In addition, a significant ionic polarizability of a given compound may be an indication of a potential ferroelectric or antiferroelectric property.

An additional indication of the possible ferroelectric or antiferroelectric property of alkali metatitanates was seen in the ob-

ACC NR: AI6032947

served analogy in the structure of their IR absorption bands which are linked to the stretching vibrations of the [TiO_6] octahedra and in the structure of the corresponding bands of the [NbO_6] and [TaO_6] octahedra in the IR abosrption spectra of the alkali metaniobates and metatantalates. The observed spectral structure is characteristic of ferroelectric materials. The authors concluded that confirmation of the effect of a gaseous medium on solid-phase synthesis of a given compound is a prerequisite for studying the ferroelectric property in this compound. Orig. art. has: 1 figure and 8 tables. [FSB: v. 3, no. 2]

SUB CODE: 11,07,20 / SUBM DATE: 14Jul65 / ORIG REF: 022 / OTH REF: 016

Card 5/5

ARKHIPOV, S.M.; KOMISSAROVA, P.D.; DRUZ', N.A.

Some properties of cesium dichromate. Zhur. neorg. khim. 9 no.2:498-499 F'64. (MIRA 17:2)

ACC NR: AP6012956 SOURCE CODE: UR/0078/65/010/009/1990/1992

AUTHOR: Breusov, O. N.; Revzina, T. V.; Druz', N. A.

ORG: none

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13

TITLE: Synthesis and certain properties of lithium tellurite

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 9, 1965, 1990-1992

TOPIC TAGS: inorganic synthesis, tellurium compound, lithium compound, x ray diffraction analysis, specific density

ABSTRACT: Lithium tellurite was obtained by reacting a solution of "chemically pure" lithium oxide hydrate with an excess of freshly precipitated tellurium dioxide. Later the excess of tellurium dioxide was filtered off and the solution of lithium tellurite evaporated to near dryness. To determine the properties of lithium tellurite, it was made into a more pure product by first being dissolved in water; the solution was filtered and evaporated in a carbon dioxide-free atmosphere. The preparation obtained in this manner contained 84.18% TeO_2 and 15.75% Li_2O (theoretical 84.23% and 15.77%, respectively). The pycnometric density of litnium tellurite, determined in toluene, was equal to 3.83 ± 0.02. Biaxial crystals are formed with a negative indicatrix of $Ng > 1.78$ and $Np = 1.676 \pm 0.003$. The lithium tellurite was also studied by x-rays. The x-ray diffraction pattern of Li_2TeO_3 indicated rhombic syngony. The parameters of the unit cell were: a = 8.79 kX;

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UDC: 546.34'244:548.736

ACC NR: AP6012956

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b = 10.52 kX; c = 7.10 kX. The number of formula units found in the unit cell were z = 7.989 = 8. The calculated density was $\rho_{calculated}$ = 3.836. The probability spatial group was D_2^2 = P 22_1 2. The solubility of Li_2TeO_3 in the 30-80 C range, in water, was studied. The compound does not form crystalline hydrates and dissolves congruently. Its solubility decreases with an increase in temperature. Orig. art. has: 1 figure and 3 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 10Apr64 / OTH REF: 002

Card 2/2 BK

Acc. Nr. AP5025798 SOURCE CODE: UR/0363/65/001/009/1590/1592

AUTHOR: Kutolin, S. A.; Druzi, N. A.

ORG: none

TITLE: Relationship between the structure and properties of lithium metazirconate and the conditions of its synthesis

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1590-1592

TOPIC TAGS: lithium compound, zirconate, IR spectroscopy

ABSTRACT: The two stable modifications of lithium metazirconate, Li_2ZrO_3I and Li_2ZrO_3II, are compared. The x ray pattern of Li_2ZrO_3 was indexed in the parameters a = 5.39 kX, c = 29.85 kX; it is shown that some of the lines are not indexed in this lattice, and hence that the lattice of Li_2ZrO_3I is pseudotetragonal. Li_2ZrO_3II was indexed in the tetragonal system with lattice parameters a = 8.98 kX and c = 3.42 kX. Analysis of the x ray data for both modifications leads to the conclusion that Li_2ZrO_3II is indeed a new modification of Li_2ZrO_3. An IR spectroscopic study of Li_2ZrO_3 in the 400-5000 cm^{-1} range revealed a broad band around 1000 cm^{-1} having a fine structure, and an absorption

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ACC NR: AP5025798

band around 450 cm^{-1}. By analogy with IR spectra of metatitanates and metazirconates, the broad band is attributed to the stretching vibration of $Zr(O/2)_6$, and the second band to bending vibrations of the octahedron. The fine structure may be related to the ferroelectric properties of Li_2ZrO_3II. The refraction of the latter, calculated from data on the refraction of the ions, is close to that obtained from the Lorenz-Lorentz formula, indicating a considerable ionic bond character in this compound. The authors thank Ye. D. Ruchkin and Ye. V. Dulepov of the Institute of Thermal Physics, SO AN SSSR for attention to this work and for their assistance. Orig. art. has: 2 tables.

SUB CODE: 07/ SUBM DATE: 03Jun65/ ORIG REF: 007/ OTH REF: 007

Card 2/2

DRUZ, Tamara Filippovna; SEREBRYAKOV, Serafim Aleksandrovich; FEDYAYEVA, N.A., red. izd-va; BODROVA, V.A., tekhn. red.

[Directives on accounting, control and inspection in river transportation] Bukhgalterskii uchet i kontrol'no-revizionnaia rabota na rechnom transporte; sbornik rukovodyashchikh dokumentov. Moskva, Izd-vo "Rechnoi transport," 1962. 596 p. (MIRA 16:6)

1. Russia (1917- R.S.F.S.R) Ministerstvo rechnogo flota. TSentral'naya bukhgalteriya.
(Inland water transportation--Accounting)

DRUZ', V.

Use of machinery in unloading bread. Mov.torg.tekh. no.3: 11-14 '56. (MLRA 9:10)

(Loading and unloading) (Bread--Transportation)

Deuz, V.A.

CA

2

Potentiometric method of investigation of catalytic hydrogenation reactions. D. V. Sokol'skiĭ and V. A. Druz (S. M. Kirov Kazakh State Univ., Alma-Ata). *Izvest. Akad. Nauk S.S.S.R.* 78, 949–52(1950).—The course of the liquid-phase hydrogenation in an electrolyte soln. on a metallic catalyst is followed by measurements of the e.m.f. E between the catalyst-electrolyte electrode and a 0.1 N calomel half-cell. In the hydrogenation of $Me_2(CH_2C)COH$ at room temp. on a H_2-satd. Raney Ni catalyst, in 0.1 N NaOH, the initial E = 1080 mv. falls, in the very beginning of the reaction, to 960 mv., and remains const. until the triple bond is completely satd. With beginning hydrogenation of the double bond, E rises by 30 mv. and remains const. as long as there is enough double bond left in the reaction mixt.; at the final stages of the satn. of the double bond, E rises slowly until, at the end of the hydrogenation, it reaches the equil. value of 1080 mv. Thus, the variation of E indicates very accurately the point of transition from the triple to the double bond, owing to the lower absorption of H_2 in the presence of the triple-bonded compd. Promotion of the Ni catalyst with Pd, 0.005–0.05 g./2 g. original Ni 50-Al 50% alloy, whereas it does increase very substantially the rate of absorption of H_2, changes E only insignificantly. Poisoning of the promoted catalyst with small amts. of $PhCH_2SH$ lowers the rate of the reaction, but does not affect E; larger amts. of the poison decrease the rate still further, but cause a rise of E at the point of inflection of the curve of the rate of reaction. Thus, the poisoning of the promoted catalyst proceeds in 2 stages; in the 1st stage it affects the activation centers of H_2, in the 2nd, the activation centers of the multiple bond. On the unpromoted catalyst, small amts. of $PhCH_2SH$ raise E from 960 to 990 mv., corresponding to poisoning of the triple-bond centers; with larger amts., E remains at 990 mv., while the rate of hydrogenation continues to fall, i.e. poisoning affects the activation centers of H_2. With still higher amts. of the poison, E increases anew, i.e. there is renewed poisoning of the triple-bond centers.

N. Thon

USSR/Chemistry - Catalysts Apr 52

"Potentiometric Investigation of Hydrogenation Reactions. Effect of Additives on the Activity of a Skeleton Nickel Catalyst," V. A. Druz', D. V. Sokol'skiy, Kazakh State U imeni S. M. Kirov, Alma-Ata

"Zhur Fiz Khim" Vol XXVI, No 4, pp 484-491

With the aid of the potentiometric method, investigated the effects of added Pt, Pd, and benzyl mercaptan on catalyst activity and emf in the hydrogenation of dimethylacetylene carbinol, sodium maleate, and sodium fumarate. The energy with

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which hydrogen is bound to the surface of the catalyst is greatest on Pt black, smallest on Pd black, and about the same on skeleton Ni as on Pd black. Addn of Pd to skeleton Ni increases the energy of H binding somewhat; furthermore, dissolved H begins to play a role in the reaction. Addn of Pt to skeleton Ni brings about a sharp increase of the energy of H binding and a noticeable reduction of the reaction rate. Depending on the limiting stage of the process, introduction of benzyl mercaptan either brings about poisoning or activation of the hydrogen or hydrocarbon.

DRUZ', V. A.

217T22

[illegible], V.A.; SOKOL'SKIY, D.V.; Prinimali uchastiye: CHULKOVA, G.L., studentka-diplomnitsa; KABIYEV, T., student-diplomnik; SAVICHE, Ye.I., laborant

Potentiometric study of the reactions underlying the catalytic hydrogenation in the gas phase. Trudy Inst.khim.nauk AN Kazakh.SSR 8:45-55 '62. (MIRA 15:12)

(Hydrogenation) (Catalysis)
(Potentiometric analysis)

DRUZ', V.A.; UTEGULOV, N.I.; SOKOL'SKIY, D.V., akademik

Role of hydrogen in the dehydrogenation of cyclohexane on platinum. Dokl. AN SSSR 162 no.2:373-375 My '65. (MIRA 18:5)

1. Kazakhskiy gosudarstvennyy univeristet im. S.M.Kirova.
2. AN KazSSR (for Sokol'skiy).

SOKOL'SKIY, D.V.; DRUZ', V.A.; ALEKSEYEVA, G.K.; SHUMATEVA, N.F.; MUSINA, S.A.

Use of oxide catalysts on carriers for the purification of exhaust gases by removing carbon monoxide and hydrocarbons. Trudy Inst.khim.nauk AN Kazakh. SSR 13:174-201 '65. (MIRA 18:9)

DAULETOV, B.; DRUZ', V.A.

Hydrogenation of a mixture of cyclohexane and acetone in mixed solvents. Vest. AN Kazakh. SSR 21 no.6:70-75 Je '65. (MIRA 18:7)

DRUZ', V.A.

Relation between the reaction rate and the potential of a catalyst in the processes of liquid phase hydrogenation. Zhur. fiz. khim. 38 no.5:1310-1312 My '64.

(MIRA 18:12)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova.
Submitted June 11, 1963.

DRUZ', V.A.; SOKOL'SKIY, D.V.

Possible mechanism underlying the effect of cathodic addition agents in the passivation of metals. Zhur. fiz. khim. 38 no.5: 1384 My '64. (MIRA 18:12)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova.
Submitted June 10, 1963.

L 3791M-66 EWT(1) DD

ACC NR: AP6024632 SOURCE CODE: UR/0217/66/011/004/0631/0637

AUTHOR: Druz', V. A.; Madiyevskiy, Yu. M. 41

ORG: Khar'kov State Pedagogic Institute im. G. S. Skovoroda (Khar'kovskiy gosudarstvenny pedagogicheskiy institut) 2

TITLE: Effect of constant magnetic and low frequency electromagnetic fields on the hydration capacity of tissues

SOURCE: Biofizika, v. 11, no. 4, 1966, 631-637

TOPIC TAGS: magnetic field, electromagnetic field, magnetic biologic effect, animal experiment, magnetobiology, ~~tissue~~ hydration, tissue physiology

ABSTRACT: Experiments were conducted on 105 male rats weighing 150—180 g and maintained on a normal diet. Preparations of internal organs were made after decapitation (one day after final feeding). An experimental and a control preparation were used in each test. Experimental preparations on copper hooks were placed 1.0—1.5 mm from the poles of an electromagnet and exposed to fields of 1000 to 20,000 oe. Duration of exposure was 1 min in all tests. After the current was switched off the preparations were removed from between the poles. Control preparations were treated identically to experimental preparations but were not exposed to EMF's. It was found that a 1 min exposure to constant EMF's of 1000—20,000 oe caused statistically reliable ($a \geq 0.950$) changes in the hydration ability of rat tissue. These shifts could not be attributed to a thermal effect or the effect of

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ACC NR: AP6024632

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switching the field on or off. The dependence between the degree of the maximum hydration capacity of various tissues and the constant magnetic field voltage assumed a phase character in that a decreased phase was a precursor of an increased phase of maximum hydration capacity as a rule. The order of sensitivity of organs to alteration (according to maximum hydration capacity) was identical during the action of a constant magnetic field and other stimuli. The most resistant organs were the brain, kidney, and liver, while cardiac muscle, intestine, spleen, testicles, and skeletal muscles were less resistant. An analogous though slightly amplified trend in changes in tissue hydration capacity occurred after exposure to low frequency EMF's of 3 cps (1000—8000 oe) and 50 cps (500—2000 oe). The 3-cps field was less effective than the 50-cps field. Presently, the mechanism of the effect of constant and low frequency EMF's on tissue hydration capacity is unknown. Both fields can cause paranecrotic reactions in tissues which do not distinguish them from other stimuli. More research along these lines is required. Orig. art. has: 1 table.

[CD]

SUB CODE: 06/ SUBM DATE: 30Jun65/ ORIG REF: 018/ OTH REF: 003/ ATD PRESS: 5047

Card 2/2 mcp

BLOKHIN, M.A.; DRUZ', V.V.

X-ray spectral analysis of multicomponent mixtures. Zav. lab. 29 no.9:1070-1074 '63. (MIRA 17:1)

1. Rostovskiy gosudarstvennyy universitet.

DRUZ', V.V.

Selecting the width of the receiving slit in ionization recording of X-ray spectrum lines. Zav. lab. 29 no.9:1078-1081 '63. (MIRA 17:1)

DRUZDZEL, J.

Prefabricated building materials for the main buildings of electric-power. p. 176. Results of the fulfillment of the National Economic Plan for 1955. P. 178. Report on the activities of the Polish Electrical Engineers Association for 1955. p. 178. PRZEGLAD ELEKTROTECHNICZNY, Warszawa. Vol. 32, no 4, Apr. 1956.

SOURCE: East European Acession List (EEAL) Library of Congress Vol. 5, no. 8, August 1956.

DRUZEV, A.V., nauchnyy sotrudnik

With regard to certain experiments. Zhivotnovodstvo 20 no. 7:89-90 Jl '58. (MIRA 11:8)

1. Laboratoriya ovtsevodstva i shersti Donskogo nauchno-issledovatel'skogo instituta sel'skogo khozyaystva.
(Sheep--Feeding and feeding stuffs)

DRUZGAL'SKIY, V.V., inzh.

Effect of the temperature of cylinder sleeves on the intensity of their corrosive wear. Mekh. i elek. sots. sel'khoz. 19 no.4:50-51 '61. (MIRA 14:11)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy traktornyy institut.
(Tractors--Engines--Cylinders)

DRUZHCHENKO, S.K.

Domna Semenovna Osadchaia. Med.sestra no.3:25-26 Mr '55. (MLRA 8:5)

1. Chernecha-Slobodskaya sel'skaya uchastkovaya bol'nitsa (Sumskaya oblast').
(OSADCHAIA, DOMNA SEMENOVNA)

BERIM, N.G.; DRUZHELYUBOVA, T.S.

Anatomical and histological changes in gypsy moth caterpillars (Porthetria dispar L.) caused by insecticides [with summary in German]. Ent. obozr. 37 no. 2:252-259 '58. (MIRA 11:7)

1. Leningradskiy sel'skokhozyaystvennyy institut.
(Gipsy moth)
(Insecticides)

DRUZHELYUBOVA, T.S.

Comparative geographical study of the ecology of cutworms. Vop. ekol. 7:54-55 '62. (MIRA 16:5)

1. Vsesoyuznyy institut zashchity rasteniy, Leningrad.
(Cutworms)

DRUZHENKOV, V.

"Utilization of Radiation in the Chemical Industry," by V. Druzhenkov, Primeneniye Atomnoy Energii v Mirnykh Tselyakh (Application of Nuclear Energy for Peaceful Purposes), edited by I. T. Alad'yev, Candidate of Technical Sciences, Moscow, Academy of Sciences USSR, 1956, pp 40-51

In work in the field of radiation chemistry nuclear reactors, installations which generate X rays or gamma-rays of high energy, and radioactive isotopes (particularly radioactive cobalt) are used as sources of radiation. Inorganic systems (particularly aqueous solutions) and a great number of organic substances are being investigated.

The use of water as a moderator and coolant in nuclear reactors has necessitated a special investigation of processes which take place when water is irradiated. It has been established that irradiation with X rays or gamma-rays of water that is free of dissolved substances does not produce any perceptible effect. On the other hand, irradiation of water that contains impurities or is saturated with air results in radiolysis. Hydrogen peroxide and explosive mixtures of hydrogen and oxygen are formed as a result of this radiolysis. The formation of explosive gas mixtures in nuclear reactors is highly undesirable.

SUM 1345

When an aqueous solution of ferrous sulfate is irradiated, the ferrous sulfate is oxidized to ferric sulfate. This reaction is of great importance in radiation chemistry, because it is used in dosimetry as a means of determining the quantity of energy that is absorbed by the object being irradiated. The reaction of the reduction of cerium ions ($Ce^{4+} \xrightarrow{\text{irradiation}} Ce^{3+}$) and other reactions are also used for this purpose.

If the water that is being irradiated has been saturated with oxygen, the yield of hydrogen peroxide produced by irradiation is considerably increased. Work by Veselovskiy and his collaborators has shown that if a semiconductor (e.g., ZnO) has been introduced into the reaction vessel, this semiconductor effectively transforms the energy of radiation into energy of the semiconductor electrons, and that the electrons are then capable of inducing a chemical process. For example, in the presence of ZnO the yield of hydrogen peroxide on irradiation of alkaline solutions is increased by a factor of 3-5 as compared with the yield obtained when no sensitizer such as ZnO has been added.

The hydrogen peroxide formed as a result of radiolysis during irradiation of a saturated solution of Ba $(OH)_2$ reacts with the barium hydroxide, forming an insoluble precipitate of barium peroxide. Under the circumstances a constant rate of the formation of hydrogen peroxide is observed. In other words, this rate does not diminish when the dose of irradiation is increased, because no decomposition of hydrogen peroxide takes place.

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DRUZHENKOV, V.

Proskurnin and Barelko found that the effectiveness of the oxidation of benzene to phenol by products of the radiolysis of water is enhanced in the presence of ions of iron. The yield of phenol in this case is increased several times. The applications mentioned above serve as examples demonstrating that it will be possible to produce important chemicals on an industrial scale by utilizing high-energy radiation after suitable conditions for the process have been found. Research done by USSR scientists and outside the USSR has shown that when a great number of powerful sources of radiation becomes available it will be possible to carry out industrial oxidation of the nitrogen of the air by the radiation method.

The problem of the transformation of nuclear energy into electrical energy is closely connected with the action of radiation on aqueous solutions. The first results of work in this field, which were reported by USSR scientists at the Geneva Conference on the Peaceful Uses of Nuclear Energy, indicated that this transformation can be accomplished by employing electrochemical systems. A judicious selection of the electrolyte and electrodes will make it possible to utilize the oxidative and reductive components of radiolysis and thus to establish a certain definite difference of potential. In a cell of this type the maximum efficiency with reference to the amount of radiation energy absorbed will be limited by radiolysis effects. The problem consists in selecting the most effective pairs of electrodes as well as solutions which produce sufficiently stable and concentrated electrochemically active components under the action of radiation.

Investigation of the effects of high-energy radiation on organic substances is of great practical importance. Splinter elements formed from uranium during the operation of nuclear reactors must be periodically separated from the uranium: otherwise the chain reaction of fission will be interfered with. In view of the fact that organic substances are used in the separation of splinter elements from uranium by extraction, the action of radiation on these organic substances is very important. Two requirements must be fulfilled: (a) the organic substances by means of which the elements are extracted must be insensitive toward radiation, so that they can be recovered and reused in subsequent extractions; (b) the substances that are to be separated must not form complex compounds with products of the radiolysis of the substance used for extraction, because otherwise losses of the elements that are being isolated will ensue, or these elements will be contaminated by impurities.

Investigation of the effects of radiation on organic substances opens up extensive possibilities as far as the initiation of chain reactions such as those encountered in halogenations, oxidations, cracking, and polymerization is concerned. From the standpoint of industrial applications, radio-chemical methods may already be regarded at this stage as superior to the methods employed hitherto in conducting such reactions.

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The radiochemical control of oxidation reactions appears to be particularly promising. Research concerning the action of radiation on organic substances also makes it possible to find materials which protect against the harmful effects of radiation.

It has been recently established that crude petroleum can be cracked to gasoline at room temperature by exposing the petroleum to gamma-radiation emitted by radioactive cobalt. If cracking of crude petroleum is carried out within a nuclear reactor, the yield of gasoline obtained will be superior to that resulting from the cracking of the same quantity of petroleum by the thermal method.

Valuable results have been achieved in the study of the effects of radiation on plastics. Radiochemical methods have been found very useful in inducing polymerization of monomers such as ethylene and propene, which cannot be readily polymerized otherwise. Under the action of radiation, monomers of this type are transformed into free radicals which initiate chain reactions, so that polymerization takes place at low temperatures. By using the radiation method, the process of polymerization can be readily controlled in such a manner that a polymer of the desired molecular weight is obtained. Furthermore, entirely new polymers with desirable characteristics can be obtained by employing the radiation effect. Among these polymers are polyperfluoropropene, polyperfluorobutadiene, and polyperfluoracrylonitrile.

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Of great interest is not only the effect of radiation on the process of polymerization, but also its action on high-polymer substances. The value of results obtained in this field is twofold. First, it is necessary to know how polymers will behave when they are used as insulators, screens, holders, interlinings, etc. in reactors and in other types of equipment where exposure to radiation takes place. Second, generation of nuclear energy on an increased scale will make it possible to apply radiation for the purpose of modifying the properties of polymers.

The first results in this field were published in the period 1951-1952. Work on the subject done under the direction of Kargin and Karpov in the USSR and by Charlesby and others outside the USSR established that irradiation of polymers leads to the scission of chemical bonds and to the formation of free radicals. After the formation of free radicals processes of cross-linking predominate in some polymers (e.g., polyethylene, polyvinylchloride, polystyrene, and natural rubber) while others (e.g., polyisobutene, polyvinyl alcohol, polymethylmethacrylate, and teflon) are mainly subjected to depolymerization and destruction. Polymers the degree of cross-linking of which has been increased by exposure to radiation acquire a number of valuable properties: their solubility in organic solvents is reduced or disappears entirely and they also become heat-resistant and acid-resistant. For instance, polyethylene articles which have been exposed to the action of radiation in a nuclear

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reactor retain their shape at 150° and soften only slightly, while polyethylene which has not been irradiated melts into a formless mass at that temperature. Destruction of polymers under the action of radiation can be applied for the production of porous (foam) polymers when it is accompanied by the evolution of gas. Thus, irradiation of polymethylmethacrylate with neutrons results in the development of gas and leads to the formation of a foam plastic. (U)

SuM. 1345

USSR/Farm Animals - Samall Horned Stock.

Abs Jour : Ref Zhur - Biol., No 1, 1958, 2586

decreased to three percent, while 97% of the sheep had a fine and semi-fine wool. The gross delivery of sheep's wool in 1952 included: 9.6% of fine wool, 15.3% of semi-coarse wool, 4.6 grams of coarse wool. In 1956, these figures were respectively: 61.0%, 3.7%, and 125.5 kilograms. The average wool yield from one sheep in 1951 was: 1.83 kilograms. In 1955 the figure was 2.5 kilograms. A study in under way to determine the results of an alternate cross breeding of three breeds: local sheep with rams of the Groznenskaya, Askaniyskaya and Kirgiz fine wool breeds.

Card 2/2

DRUZHICHINSKIY, M.V.

ROMANYUK, Vasiliy Grigor'yevich, zasluzhennyy master sporta SSSR; DRUZHICHINSKIY, M.V., inzhener-mayor, redaktor; STREL'NIKOVA, M.A., tekhnicheskiy redaktor

[Notes of a parachute tester] Zametki parashiutista-ispytatelia. Izd. 3-e, perer. i dop. Moskva, Voen. izd-vo Ministerstva obor. SSSR, 1956. 254 p. (MIRA 10:2)
(Parachutes--Testing)

GRIGOR'YEV, F.N.; DRUZHIN, I.I.

Comparing material balances of heats poured in continuous steel casting equipment and in the casting pit. Metallurg 9 no.3:23-27 Mr '64. (MIRA 17:3)

1. Donetskiy metallurgicheskiy zavod.

RYABOV, S.I.; ALMAZOV, V.A.; PAVLOV, B.A.; DRUZHIN, I.M.

Effect of ACTH and cortisone on the functional activity of leukocytes. Probl. gemat.i perel. krovi 6 no.1:31-36 '61. (MIRA 14:2)
(ACTH) (CORTISONE) (LEUKOCYTES)

DRUZHINA, Yu.

Shoe-making. Tekh. zhur., No 2, 1948.

ACC NR: AP7000743 SOURCE CODE: UR/0079/66/036/005/0923/0930

ABRAMOV, V. S., DRUZHINA, Z. S., Kazan' Chemicotechnological Institute im. S. M. Kirov (Kazanskiy khimiko-tekhnologicheskiy institut)

23 B

"Synthesis and Properties of Amides of Cyclic Phosphorous Acids"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 5, 1966, pp 923-930

Abstract: A series of dialkylamides of glycolphosphorous acid and its homologu were synthesized for a systematic study of their properties. The dialkylamides of ethyleneglycolphosphorous acid and propyleneglycolphosphorous acid were found to add sulfur and selenium, forming dialkylamides of glycolthiophosphoric and glycolselenophosphoric acids. Dialkylamides of ethyleneglycolphosphorous acid and its homologs react with cuprous chloride to form complexes. They are readily oxidized by isopropylbenzene hydroperoxide. The infrared spectra of the compounds obtained are discussed. Orig. art. has: 1 figure and 5 tables. [JPRS: 37,023]

TOPIC TAGS: organic amide, phosphorous acid, organic synthetic process, organoselenium compound

SUB CODE: 07 / SUBM DATE: 24May65 / ORIG REF: 005 / OTH REF: 004

Card 1/1 vmb UDC: 547.241

0923 1913

DRUZHININ, A.

Transistorized voltage regulator with 150 v. rating. Radio no.7:52-53 Jl '65. (MIRA 18:9)

DRUZHININ, A.

Parallel connection of transistor diodes. Radio no.6:47 Je '63.
(MIRA 16:7)
(Transistor circuits) (Electric current rectifiers)

NGUYEN-VAN-TKHAY; DRUZHININ, A.D.

Length, weight, age, and growth rate of Therapon theraps Cuv. et Val. in the Gulf of Tonkin (North Vietnam). Vop. ikht. 3 no.3: 564-567 '63. (MIRA 16:10)

1. Kafedra zoologii Khanoyskogo universiteta, Demokraticheskaya Respublika V'yetnam (for Nguyen-Van-Tkhay). 2. Sakhalinskoye otdeleniye Tikhookeanskogo nauchno-issledovatel'skogo instituta rybnogo khozyaystva i okeanografii - TINRO, SSSR, i Sovetsko-V'yetnamskaya nauchno-poiskovaya ekspeditsiya- Tikhookeanskogo - nauchno-issledovatel'skogo instituta rybnogo khozyaystva i okeanografii TINRO v Demokraticheskoy Respublike V'yetnam (for Druzhinin).
(Tonkin, Gulf of--Tiger fishes)

DRUZHININ, A.M., inzh.

The D-446 motor grader with hydraulic drive. Stroi.i dor.mashinostr. 5 no.3:10-12 Mr 60. (MIRA 13:6)
(Road machinery--Hydraulic drive)

DRUZHININ, A. M. DECEASED 1962/7

c. 1961

PSYCHOLOGY

see ILC

ZHEDENOV, Vladimir Nikolayevich, prof.; DRUZHININ, A.N., dotsent, red.; SIDOROVA, V.I., red.izd-va; GRIGORCHUK, L.A., tekhn.red.

[General anatomy of domestic animals] Obshchaia anatomiia domashnikh zhivotnykh. Moskva, Gos. izd-vo "Sovetskaia nauka," 1958. 562 p. (MIRA 12:2)

1. Odesskiy sel'skokhozyaystvennyy institut, g. Odessa (for Zhedenov).
(Veterinary anatomy)

GAMBARYAN, Petr Petrovich; DRUZHININ, A.N., otv. red.[deceased]; VARTANESOVA, A.A., red. izd-va; AZIZBEKYAN, L.A., tekhn. red.

[Adaptive characteristics of motor organs in burrowing mammals] Prisposobitel'nye osobennosti organov dvizheniia roiushchikh mlekopitaiushchikh. Erevan, Izd-vo Akad. nauk Armianskoi SSR, 1960. 194 p. (MIRA 14:5)
(ANIMAL LOCOMOTION) (ADAPTATION (BIOLOGY))

KADEYKIN, V.A., dots.; SOKOLOV, V.D., dots.; DRUZHININ, A.S., kand. ist. nauk; SUSLIKOV, A.A., st. prep.

[Reports and papers of the Scientific Conference on the Subject "Expanding socialist competition in the coal industry of the Kuznetsk Basin"] Doklady i soobshcheniia Nauchnoi konferentsii na temu "Razvitie sotsialisticheskogo sorevnovaniia v ugol'noi promyshlennosti Kuzbassa." Kemerovo, Kemerovskii gornyi in-t, 1962. 113 p. (MIRA 17:7)

1. Nauchnaya konferentsiya na temu "Razvitiye sotsialisticheskogo sorevnovaniya v ugol'noy promyshlennosti Kuzbassa.

DRUZHININ, A.V.; TIKHONOV, N.D.; ZUYEV, V.N.

Lead-zinc mineralization in molybdenum deposits of eastern Transbaikalia. Trudy IGEM no.83:505-522 '63. (MIRA 16:11)

DRUZHININ, A.V.

Geothermic characteristics of rocks in the Samara Bend. Geol. nefti i gaza 7 no.6:48-52 Je '63. (MIRA 16:9)

1. Kuybyshevskiy nauchno-issledovatel'skiy institut po pererabotke nefti.

DRUZHININ, A.V.; KOLESNICHENKO, V.S.

Age correlation of tungsten and tin mineralization in the Kukul'beyskiy ore region (eastern Transbaikalia). Geol. rud. mestorozh. 6 no.1:81-87 Ja-F '64.
(MIRA 17:11)

1. Moskovskiy institut stali i splavov.

DRUZHININ, A.V.

Characteristics of the formation and structure of the zone of oxidation of the Davenda molybdenum deposit. Sov. geol. no.53: 87-97 '56. (MLRA 10:4)

(Davenda--Molybdenum ores)

DRUZHININ, A.V.

Pre-ore dikes and xenolites in ancient rocks in connection with the distribution of mineral associations. Izv. vys. ucheb. zav.; geol. i razv. 1 no.4:92-99 Ap '58. (MIRA 11:12)

1.Moskovskiy institut tsvetnykh metallov i zolota imeni M.I. Kalinina, Kafedra poleznykh iskopayemykh.
(Mineralogy)

VOL'FSON, F.I.; DRUZHININ, A.V.

Practical guides to structural geology and geological mapping. Izv. vys. ucheb. zav.; geol. i razv. 1 no.7:128-129 Jl '58. (MIRA 12:8)

1.Moskovskiy institut tsvetnykh metallov i zolota im. M.I. Kalinina. (Geology--Maps) (Geology, Structural)

DRUZHININ, A.V.

Certain rare-metal deposits of the stockwork type and characteristics of the formation of small fractures. Izv.vys.ucheb.zav.: geol.i razv. 1 no.9:92-99 S '58. (MIRA 12:9)

1. Moskovskiy institut tsvetnykh metallov i zolota im. M.I. Kalinina, Kafedra poleznykh iskopayemykh.
(Transbaikalia--Ore deposits)

NIKOLIN, A.V.; BELOV, A.P., kapitan-nastavnik; VAHLAMOV, I.S., kapitan-nastavnik; KOSMACHEV, I.K., kapitan-nastavnik; SARATOV, V.F., kapitan-nastavnik; SHMONIN, M.I., kapitan-nastavnik; BEKMAN, A.A., kapitan; DRUZHININ, A.V., kapitan; IVANINA, B.F., kapitan; POLETAYEV, L.A., kapitan; VESHCHILOV, K.A.; VYKHODTSEV, P.K.; SMOLDYREV, A.Ye.; VERESHCHAGIN, Ya.A.; SUTYRIN, M.A.; SAVOSTIN, M.D.; FILYASOV, K.A.; GOLOVUSHKIN, M.P.; IVANOV, A.I.; FILYASOV, K.A., otv.za vypusk; ALEKSEYEV, V.I., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Rules of navigation on R.S.F.S.R. inland waterways] Pravila plavaniia po vnutrennim vodnym putiam RSFSR. Vvedeny v deistvie s 1 marta 1959 g. prikazom ministra rechnogo flota no.28 ot 11 fevralia 1959 g. Moskva, Izd-vo "Rechnoi transport," 1959. 124 p. (MIRA 13:6)

1. Russia (1917- R.S.F.S.R.) Ministerstvo rechnogo flota. 2. Glavnyy revizor po bezopasnosti sudokhodstva (for Nikolin). 3. Nachal'niki basseynovykh sudokhodnykh inspektsiy (for Veshchilov, Vykhodtsev, Smoldyrev). 4. Rabotniki Upravleniya glavnogo revizora po bezopasnosti sudokhodstva (for Vereshchagin, Sutyrin, Savostin, Filyasov). 5. Glavnoye upravleniye vodnykh putey i gidrotekhnicheskikh sooruzheniy (for Golovushkin).

(Inland navigation--Laws and regulations)

VOL'FSON, F.I.; LUKIN, L.I.; DYNKOV, A.I.; KUSHNAREV, I.P.; PEK, A.V.; RYBALOV, B.L.; SOKYUSHKI..., Ye.P.; KHOROSHILOV, L.V.; CHERNYSHEV, V.F.; BIRYUKOV, V.I.; GARMASH, A.A.; DRUZHININ, A.V.; KARAMYAN, K.A.; KUZNETSOV, K.F.; LOZOVSKIY, V.I.; MALINOVSKIY, Ye.P.; NEVSKIY, V.A.; PAVLOV, N.V.; ROBINSON, B.M.; SAMONOV, I.Z.; SIDORENKO, A.V. [deceased]; SOPKO, P.F.; CHEGLOKOV, S.V.; YUDIN, B.A.; KREYTER, V.M., doktor geologo-mineral.nauk; retsenzent; KOTLYAR, V.N., doktor geologo-mineral.nauk, retsenzent; GRUSHEVOY, V.G., doktor geologo-mineral.nauk, retsenzent; NAKOVNIK, N.I., doktor geologo-mineral.nauk, retsenzent; KUREK, N.N., doktor geologo-mineral. nauk, retsenzent; LIOGEN'KIY, S.N., retsenzent; SHATALOV, Ye.T., doktor geologo-mineral.nauk, red.; KRISTAL'NYY, B.V., red.; SERGEYEVA, N.A., red.izd-va; GUROVA, O.A., tekhn.red.

[Basic problems and methods of studying structures of ore provinces

(Continued on next card)

VOL'FSON, F.I.---(continued) Card 2.
and deposits] Osnovnye voprosy i metody izucheniia struktur rudnykh polei i mestorozhdenii. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1960. 623 p.
(MIRA 13:11)
1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii. 2. Moskovskiy institut tsvetnykh metallov i zolota (for Dyukov, Biryukov, Druzhinin, Kuznetsov). 3. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov AN SSSR (for Garmash). 4. Akademiya nauk Armyanskoy SSR (for Karamyan). 5. Baleyzoloto (for Sidorenko). 6. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR (for Malinovskiy, Nevskiy, Pavlov, Chernyshev). 7. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze (for Ronenson). 8. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya (for Samonov). 9. Voronezhskiy universitet (for Sopko). 10. Kol'skiy filial AN SSSR (for Yudin).
(Ore deposits)

DRUZHININ, A.V.

Geological structure of the Bukuka deposit. Geol. rud. mestorozh. no.1:70-82 Ja-F '60. (MIRA 13:7)

1. Institut tsvetnykh metallov, Moskva.
(Bukuka region (Transbaikalia)--Ore deposits)

DRUZHININ, A.V.

Another possible way of graphically determining faulting in rupture zones. Izv. vys. ucheb. zav.; tsvet. met. 3 no.4:3-5 '60.
(MIRA 13:9)

1. Krasnoyarskiy institut tsvetnykh metallov, Kafedra poleznykh iskopayemykh.
(Faults (Geology))

DRUZHININ, A. V. and VOL'FSON, F. I. (reader)

"Patterns of Distribution of Ore Fields in Different Structural-Facies Zones of East Zabaykal'ye"

report presented at the First All-Union Conference on the Geology and Metallurgy of the Pacific Ocean Ore Belt, Vladivostok, 2 October 1960

So: Geologiya Rudnykh Mestorozhdeniy, No. 1, 1961, pages 119-127

DRUZHININ, A.V.

Replacement of wolframite and some sulfides by later molybdenite in ores of the Bukuka deposit. Geol.rud.mestorozh. no.4:91-94 Jl-Ag '61. (MIRA 14:10)

1. Institut tsvetnykh metallov, Moskva.
(Bukuka region—Ore deposits) (Bukuka region—Minerals)

DRUZHININ, A.V.; ZVYAGINTSEV, Ye.P.

Using overburden rocks of the Kursk Magnetic Anomaly for making cement. Gor. zhur. no.10:25-27 O '61. (MIRA 15:2)

1. Yuzhgiproruda, g. Khar'kov.
(Kursk magnetic anomaly—Cement)

DRUZHININ, A.V.; MEL'NIKOVA, K.M.

Main features of the geological texture of the Antonovogorsk tungsten deposit in eastern Transbaikalia. Izv. vys. ucheb. zav.; tsvet. met. 4 no.2:11-18 '61. (MIRA 14:6)

1. Krasnoyarskiy institut tsvetnykh metallov. Kafedra poleznykh iskopayemykh.

(Transbaikalia--Geology, Structural)
(Tungsten ores)

DRUZHININ, A.V.; TIKHONOV, N.D.; SEREBRYAKOV, N.N.

Tectonic pebbles in disjunctive dislocations occurring among granitoids. Izv.vys.ucheb.zav.;geol.i razv. 4 no.10:48-52 O '61. (MIRA 14:12)

1. Moskovskiy institut tsvetnykh metallov i zolota imeni Kalinina.
(Pebbles)

DRUZHININ, A.V.

Relationship between the geothermal conditions of a sedimentary formation and a crystalline basement. Geol. nefti i gaza 5 no. 3:44-48 Mr '61. (MIRA 14:4)

1. Kuybyshev, NII NP.
(Kuybyshev Province—Rocks—Thermal properties)

S/169/63/000/002/048/127
D263/D307

AUTHOR: Druzhinin, A. V.

TITLE: Geothermal conditions of Kuybyshevskiye Povolzh'ye

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 5-6, abstract 2G25 (Tr. Kuybyshevsk. n.-i. in-ta neft. promsti, 1962, no. 11, 227-238)

TEXT: Analysis of geothermal data shows that increased geothermal gradient in the lower parts of the section, mostly connected with the presence of thick terrigenous sediments or clayey carbonates possessing high thermal resistance, is typical for Kuybyshevskiye Povolzh'ye. Terrigenous complexes of all stratigraphic horizons, particularly the Devonian, exhibit increased thermal gradients. More detailed thermal characteristics of the carbonate and terrigenous zones may be obtained by comparing the averaged values of geothermal steps calculated at intervals. The main factors determining the heat regime of the region are the relief of the crystalline basement and the lithological structure of the section. [Abstracter's note: Complete translation.]

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DRUZHININ, A.V.

Hypogenic replacement of ore and vein minerals in the ores of tungsten deposits of eastern Transbaikalia. Izv.vys.ucheb.zav.; geol.i razv. 5 no.9:64-72 S '62. (MIRA 16:1)
(Transbaikalia--Tungsten ores)

DRUZHININ, A.V.

Geothermal field of the intraformational Kama-Kinel' Depression. Geol.nefti i gaza 6 no.3:53-55 Mr '62. (MIRA 15:4)

1. Kuybyshevskiy nauchno-issledovatel'skiy institut po pererabotke nefti.

(Kuybyshev Province--Earth temperature)

DRUZHININ, A.V., gornyy inzh.

Using the linear programming method in planning the operation of equipment in an open-pit mine. Gor.zhur. no.1:28-34 Ja '63. (MIRA 16:1)

1. Gosudarstvennyy institut po proyektirovaniyu razrabotki rudnykh mestorozhdeniy yuzhnykh rayonov SSSR.
(Mining machinery) (Linear programming)

DRUZHININ, A.V., inzh.

Economic basis of the efficiency of mining equipment in the evaluation of design solutions. Izv.vys.ucheb. zav.;gor. zhur. 7 no.3:41-47 '64 (MIRA 17:8)

1. Khar'kovskiy inzhenerno-ekonomicheskiy institut. Rekomendovana kafedroy ekonomiki i organizatsii gornogo proizvodstva.

DRUZHININ, A.V., aspirant; TIKHONOV, N.D.

Some characteristics of the distribution of tin ore, tin-tungsten, and molybdenum-complex metal deposits in eastern Transbaikalia. Izv.vys. ucheb. zav.; geol. i razv. 7 no.7:62-67 Jl '64 (MIRA 18:2)

1. Universitet druzhby narodov im. P. Lumumby i Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya SSSR.

DRUZHININ, A.V., inzh.

Determination of the production capacity of a strip mine. Izv. vys. ucheb. zav.; gor. zhur. 8 no.2:59-63 '65. (MIRA 18:5)

1. Khar'kovskiy inzhenerno-ekonomicheskiy institut.

DRUZHININ, A.V.

Barium migration along the surface of tungsten, molybdenum and rhenium coated with adsorbed gas films. Radiotekh. i elektron. 10 no.3:498-504 Mr '65.

(MIRA 18:3)

EWT(m)/T/EWP(t)ETI IJP(c) DS/JD/JG

ACC NR: AP6013262 SOURCE CODE: UR/0413/66/000/008/0052/0052 36 B

INVENTOR: Afanas'yev, V. A.; Volodin, Yu. A.; Smirnov, V. A.; Druzhinin, A. V.

ORG: none

TITLE: Oxide-coated cathode[1] Class 21, No. 180710[15]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 52

TOPIC TAGS: electron tube cathode, surface active coating, iridium coating, osmium coating, oxide coating, oxide coated cathode

ABSTRACT: An Author Certificate has been issued describing an oxide-coated cathode for electronic tubes containing a base on part of the surface of which is an emissive coating. To suppress the emission with an inactive surface coating and to obtain a clearly defined emitting surface, an iridium[21] or osmium[21] coating is applied on the inactive surface of the emissive coating. [Translation] [NT]

SUB CODE: 09/ SUBM DATE: 20Apr65/

Card 1/1 UDC: 621.385.032.213.6

AUTHORS: Popov, B.N. and Druzhinin, A.V. SOV/109-3-8-16/18

TITLE: High-vacuum, Emission Electron Microscope (Vysokovakuumnyy emissionnyy elektronnyy mikroskop)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 8, pp 1084 - 1091 (USSR)

ABSTRACT: One of the important problems in cathode electronics is the investigation of the distribution of the emission over the surface of a cathode. This may be done by means of an electron microscope provided the instrument is designed in such a way that its vacuum is better than 5×10^{-7} mmHg. A special instrument fulfilling this requirement was designed. The device is shown in the photograph of Figure 1. It consists of the following units: 1) the main cylinder of the microscope; 2) a bellows-type joint; 3) vacuum system; 4) a window for visual observation; 5) a window for the photo-camera; 6) a pressure gauge (type LM-2); 7) an electromagnet; 8) a glass bulb; 9) a cathode-shifting mechanism and 10) the input stage of an electrometric amplifier. The main part of the microscope is shown in Figure 2; this comprises the following units: a) the

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investigated cathode; b) an immersion lens; c) projection lens; d) a high-voltage lead; e) the photocamera window; f) a screen; g) a protective cylinder; h) a collector; i) a mirror; j) an evacuating tube; k) a movable anode; l) a glass insulator; m) a bellows-type joint; n) a Kovar tube; o) a flange for the cathode and p) a flange for the cathode-shifting mechanism. The microscope was made vacuum-tight by employing copper gaskets instead of the usual rubber rings... It was possible to obtain a vacuum of 2×10^{-7}, the normal evacuation time being 12-18 hours. The electron-optical system of the microscope consists of an immersion lens and a projection lens. The immersion lens consists of the investigated cathode (Figure 3), a focusing electrode and the anode diaphragm. The projection lens consists of two electrical lenses and it was specially designed by D.V. Fetisov. If the microscope were to be employed in the investigation of L-cathodes and pressed cathodes, it should have a resolution of the order of 0.1 μ. In the microscope concerned, the resolving power is primarily dependent on the chromatic

aberration of the immersion lens. From the calculations, it follows that this aberration is of the order of 0.03 μ. The spherical aberration of the immersion lens is of the order of 0.01 μ and it is possible to neglect the other types of aberration. However, in the investigation of the actual cathodes, the resolution of the microscope is also dependent on the condition of the investigated surface; a rough cathode surface or the contact fields of the cathode spots can result in a significant deterioration of the resolving power of the microscope. The microscope is being used to investigate the structure of L-cathodes; a photograph of such a cathode is shown in Figure 4. The authors express their gratitude to D.V. Fetisov for constructing the electrostatic lenses and to M.M. Fedorov for his interest in this work.

High-vacuum, Emission Electron Microscope SOV/109-3-8-16/18

There are 4 figures and 15 references, 9 of which are Soviet, 3 English, 2 French and 1 German.

SUBMITTED: January 29, 1958

1. Electron microscopes--Design 2. Electron microscopes--Operation 3. Electron microscopes--Performance 4. Cathodes (Electron tube) --Analysis 5. Thermionic emission--Analysis

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AUTHOR: Druzhinin, A.V. SOV/149-58-5-1/18

TITLE: Tellurium and Selenium in the Ores of Certain Tungsten Deposits of Eastern Transbaikalia (Tellur i selen v rudakh nekotorykh vol'framovykh mestorozhdeniy vostochnogo Zabaykal'ya)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, 1958, Nr 5, pp 3 - 7 + 1 plate (USSR)

ABSTRACT: During 1955-1956 the scientific personnel of the Moscow Institute for Non-ferrous Metals and Gold studied the composition of tungsten ores from Bukuka, Belukha and Antonova Gora, the mineralogy of which has been studied in great detail by M.D. Drozdov (Ref 1), A.N. and V.A. Assovskiy (Ref 2) and Levitskiy (Ref 3). These authors described most of the ore and vein minerals known at the time. However, later, new ore seams and deeper horizons of earlier known ore veins were discovered.
I.S. Volynskiy (Ref 4) detected and described for the first time a number of new minerals found in this region (tetradymite, tellurium, altaite, hessite, cosalite, bixbyite, valleriite, etc.). In this paper only tellurium minerals will be described, since they are found more

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extensively than some other scattered elements and may be of industrial interest. It is pointed out that it is the first time that tellurium minerals have been detected in the tungsten deposits of Eastern Transbaikalia. Professor I.S. Volynskiy was available for consultation relating to the mineralogical investigations; the chemical analyses were made in the IMGRE laboratories. The results of the investigations can be summarised thus: 1) tellurium minerals in the tungsten deposits of Bukuka, Belukha and Antonova Gora occur in two associations relating to the quartz-sulphide stage: tetradymite-bismuthine-chalcopyrite-pyrrhotine and bismuth-tellurium-galinine. It was found that there is a close and continuous association between tellurides and bismuth; 2) separation of tellurium minerals proceeded under conditions of a relatively high concentration of S ions in the solutions. However, the quantity of S ions was generally inadequate to combine all the iron in the form of pyrites and bismuth and tellurium in the form of sulphides or tellurides; 3) as regards tellurium, the

industrial importance of the investigated deposits has not been sufficiently clarified and additional chemical investigations of the ores and of the beneficiation products will be necessary. Of greatest interest are the quartz-wolframite veins of Belukha, which are rich in sulphides, and the ore bodies from Bukuka. From the point of view of tellurium production, the most interesting association is tetradymite-bismuthine-chalcopyrite-pyrrhotine; 4) the content of selenium in the ore minerals is insignificant , varying from thousandths to hundredths of 1%. The largest quantity was established in pyrites (0.0175%) and bismuthine (0.016%). Compared with tellurium, the relative concentration of selenium in earlier formed minerals is higher than in younger minerals.
There are 2 figures and 6 Soviet references.

Tellurium and Selenium in the Ores of Certain Tungsten Deposits of Eastern Transbaikalia SOV/149-58-5-1/18

ASSOCIATIONS: Moskovskiy institut tsvetnykh metallov i zolota (Moscow Institute of Non-ferrous Metals) Kafedra poleznykh iskopayemykh (Chair for Minerals)

SUBMITTED: January 27, 1958

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AUTHORS: Druzhinin, A. V., Popov, B. N. SOV/48-23-4-19/21

TITLE: A High Vacuum Electron Microscope for the Investigation of Cathodes (Vysokovakuumnyy elektronnyy mikroskop dlya issledovaniya katodov)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1959, Vol 23, Nr 4, pp 522 - 526 (USSR)

ABSTRACT: For the investigation of the hot cathodes an electron microscope with a gas pressure of only $2\text{-}5.10^{-7}$ mm Hg developed. This entailed the necessity of devising new seals. Special mention is made of the internal image screen, which can be observed and photographed by means of a mirror. The instrument features a special appliance by which the electron current may be measured. Next, the construction is described and it is shown that in the design special importance had been attached to a quick change of the cathode, high efficiency of the vacuum pumps, and the possibility of observing poisonous chemical processes. The electron optical system is then described. It features an immersion object lens and the projecting lens consists of two unipotential lenses. A figure shows the whole experimental arrangement. Investigations carried out with this new instrument had the purpose of clarifying to what extent the unevenness of the cathode surface exerts an

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